

ABSTRACT OF THE INVENTION

A RF switch comprises a substrate having two RF traces separated by a first gap, and coplanar ground traces separated from the RF traces by a second gap, a membrane substantially parallel to the substrate and incorporating a conductive bridge, and an electrical mechanism for bringing the bridge into contact with the RF and ground traces, and for spacing the bridge apart from these traces. The membrane flexes in a membrane mode toward and away from the traces, providing extremely fast switching. A series configuration includes the bridge shorting the two RF traces, and a shunt configuration includes the bridge shorting the RF and ground traces. A separate embodiment provides a membrane vertical to the substrate and flexing in a direction parallel to it.